

ABSTRACT

The DR. IAM & CANTIKA Shoe Factory is currently facing operational challenges due to an imbalance between production targets and actual production realization throughout 2024. The largest gap occurred in July 2024, with a shortfall of 148 units in men's oxford shoe production. Over the course of the year, eight months recorded underproduction and four months experienced overproduction, leading to various risks in the production process and indicating potential waste. This study aims to identify production risks and formulate mitigation strategies by integrating the Value Stream Mapping (VSM) and House of Risk (HOR) approaches. VSM is utilized to map the activity flow and detect waste, while HOR is applied to identify and prioritize potential risks and design effective mitigation strategies. The research identified twenty risk events and eighteen risk agents. Based on Aggregate Risk Potential (ARP) assessment using a Pareto diagram, two priority risk agents were identified: the individual-target-based work system and the quantity-based incentive system, rather than quality-based. These selected risk agents were further analyzed using the Five Whys method to determine root causes and formulate potential mitigation actions. Two mitigation actions were selected: (1) changing the production target system to group targets per workstation with batch-based tracking, and (2) implementing a "Quality Tracker" through a spreadsheet-based dashboard to monitor product quality. This dashboard design is expected to serve as a practical tool for DR. IAM & CANTIKA's management to monitor production targets per batch and track the number of defective products in each batch.

Keyword: House of Risk, Value Stream Mapping, Waste, Risk